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EXAMINER	
GAMINO, CARLOS J	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/552,180	TEH, LIP	
	Examiner	Art Unit	
	CARLOS GAMINO	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 February 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 8-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 8-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claims 1-3, 8-16 and 19-21** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 1 recites the limitation "the surface of the tensile flange". There is insufficient antecedent basis for this limitation in the claim. For examination purposes, this will be taken to mean any surface of the flange.

4. Claim 1 recites "the intermediate weld and the second weld extending continuously along the surface of the PHS from the connection weld to the location that is remote from the connection weld". It is not clear as to how the second weld can be formed at a location that is remote from the connection weld and extend along the surface of the PHS from the connection weld to the remote location? The intermediate weld clearly does this but not the second weld. Applicant is asked to clarify.

5. Claim 2 recites "wherein the tensile flange comprises one or more flanges of the ... (PHS)." The examiner notes that the flange does not comprise more flanges but that the PHS is comprised of flanges. For the purpose of this examination, the examiner interprets this limitation as – the PHS comprising one or more tensile flanges.

6. Claim 13 recites "the second weld has a width ranging from 10 to 30 mm." The examiner believes that since the applicants have amended claim 1 to have separate and distinct intermediate welds this limitation is incorrect since it is based on the second weld containing the intermediate welds as claimed previously.

Claim Rejections - 35 USC § 103

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. **Claims 1-3 and 10-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Tadateru et al. (JP 2003-293450, submitted by applicant), please refer to the English translation provided with this office action.

Regarding claim 1, Tadateru teaches:

A method for welding a member and an end of a polygonal hollow section (PHS) [square steel tube and diaphragm; paragraph 0034 and figures 1-4] to form a joint, the method comprising:

forming a connection weld [weld metal (30) or the root pass of weld metal (30)] connecting a tensile flange [the column-diaphragm joint are under tensile stress; paragraph 0005] of the PHS and the member, the connection weld extending transversely across the tensile flange [the connection weld does extend transversely, as do all welds in Tadateru, across the column and diaphragm; should the applicant disagree the examiner refers the applicant to pages 3-6 of the office action dated 10/2/09];

forming a second weld [weld (31, 311)] on the surface of the tensile flange at a location that is remote from the connection weld [weld (31, 311) is remote from the root pass of weld metal (30)], by applying at least one weld bead transversely to the PHS; and

Tadateru does not teach:

forming an intermediate weld on the surface of the tensile flange between the connection weld and the second weld by applying at least one weld bead transversely to the PHS, the intermediate weld and the second weld extending continuously along the surface of the PHS from the connection weld to the location that is remote from the connection weld to cause a greatest longitudinal normal strain to occur adjacent the remote location.

If the connection weld is taken to be the entire weld metal (30) the following applies, interpretation A. The examiner notes that Tadateru does not state how the groove weld, weld (30), or the cosmetic weld, (weld (31, 311), are formed but does state that the distance "a", which corresponds to the width of the cosmetic weld, is at least 5mm or favorably three times the plate thickness; paragraph 0030. Thus, the thicker the plate the wider the cosmetic weld will become. So, one of ordinary skill in the art would know that there are several methods, SAW, GMAW, SMAW, etc., to form the weld beads to produce a welded joint. So for example, a typical GMAW weld bead width can range anywhere from 3mm to 12mm depending on numerous variables: electrode size, power input, weld speed, technique, desired heat input, thickness of the material and so on. So, if a reasonable weld bead size of 5mm is used to make weld

(31, 311) at a width of at least 15mm (the distance of the weld from toe (30A) to toe (31A)), that would be three weld beads extending from the groove weld, two intermediate weld beads (b, c) and one spaced weld bead (a); see figure B below. The examiner notes that depending on which method, figure 1b, 2b or 3, of Tadateru one chooses and the thickness of the materials involved, the cosmetic weld may vary in size; see figure B. Thus, the method of joint design is very case dependent and the selection of specific welding parameters and weld bead widths is well within the purview of one of ordinary skill. It would have been obvious to one of ordinary skill in the art at the time of the invention to choose welding parameters based on the materials being joined to create the second weld from a plurality of weld beads as shown in figure B.

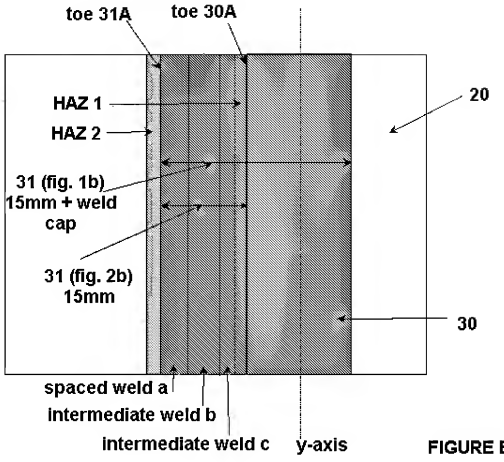

FIGURE B

If the connection weld is taken to be only the root pass of weld metal (30) then the following applies, interpretation B. It is extremely well known in the art that a bevel joint, as shown in figures 1-4, is commonly constructed from multiple weld beads. The first being the root pass, the last being the cap pass and everything in between being intermediate weld passes. Thus, one welding a PHS to a diaphragm that is thick enough to need at least one of each pass and applying the method taught by Tadateru would have at least a root pass [connection weld], an intermediate pass [intermediate weld], a cap pass [another intermediate weld] and a cosmetic weld [second weld]. The

examiner notes that the groove face of the bevel joint is a surface of a flange; in fact any portion of a flange that can be viewed is a surface of the flange.

Concerning "to cause a greatest longitudinal normal strain to occur adjacent the remote location", the examiner notes that Tadateru does not create the cosmetic infill weld for the same purpose as claimed however, since the method steps of the prior art are identical to the claimed method and Tadateru is concerned about cracking caused by stresses it is the examiners position that the prior art also intrinsically achieves the same result.

Regarding claim 2, Tadateru teaches:

wherein the tensile flange comprises one or more flanges of the polygonal hollow section (PHS) [as noted above Tadateru is welding a square tube so there are four flanges and the joint is under tensile stress so at least one of the flanges under tensile stress is welded].

Regarding claim 3, Tadateru teaches:

wherein the polygonal hollow section (PHS) is at least one of a rectangular hollow section (RHS) and a square hollow section (SHS) [square steel tube; see above], and the tensile flange comprises a single flange of the PHS [see the rejection of claim 2 above].

Regarding claim 10, Tadateru teaches (see figure C below, individual weld beads added by examiner):

wherein an additional weld bead [weld pass (q or p)] is applied in a region defined between the member [diaphragm (20)], the connection weld [root pass (o) or the

entire weld (30)] and the intermediate weld bead [intermediate pass (m or c)] immediately adjacent to the connection weld. For clarification pass (q) is between (m), (o) and 20 and applies because a groove weld is typically welded in multiple passes as shown below in figure C. An alternative interpretation is that pass (p) is between (c), (20) and (30).

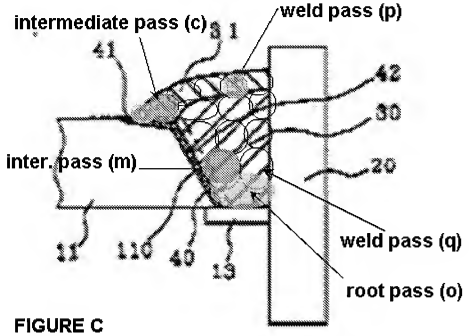

FIGURE C

Regarding claims 11 and 14, Tadateru does not teach:

wherein the flange has a flange thickness and the additional weld bead has a thickness that is at least 0.5 times the flange thickness or the one or more intermediate weld beads each have a thickness that is in the range of 0.3 to 0.6 times the flange thickness.

However, Tadateru does limit the thickness of the weld (31) to not less than 0.1t (where t is the thickness of the member possessing the groove). In the specification the

applicant states that the tube thickness is 4-5 mm. One of ordinary skill in the art at the time of the invention would know that with the applicant's disclosed weld bead thickness of 2-3mm is typical of several welding processes and that the amount of weld that can be deposited in a single pass is determined by numerous variables. This is a matter of joint design and the maximum thickness of a weld bead can be determined by variables such as the thickness of the material being welded, the heat input, the process being used, desired microstructure or others. Therefore, if the method of Tadateru were to be performed on 4-5 mm tubular members to decrease the weldment's cracking susceptibility it would have been obvious to one of ordinary skill in the art of joint design at the time of the invention to have used a weld with a thickness of 2-3 mm or thicker to speed up the welding process but to limit the thickness of the weld beads to avoid defects from oversized weld beads such as burn through. Additionally, reading Tadateru reference would appreciate that the thickness of the weld bead is not critical as long as it is above 0.1t, therefore selection of a particular weld bead thickness would have been within purview of one of ordinary skill in the art at the time of the invention absent any unexpected results. *Furthermore, the examiner would like the applicant to point out where in the specification the limitations of claims 11 and 14 are addressed.*

Regarding claim 12, Tadateru teaches:

wherein the connection weld is formed around a peripheral end of the polygonal hollow section (PHS) to fully connect the end to the member.

Tadateru does state that the steel square tube is butt welded to a diaphragm; paragraph 0034. Therefore, it is the examiners position that any of the welds in figures

1-3 used to join the tube and diaphragm would be "fully" connected. Additionally, whether or not the one welds the entire circumference of a tube to a diaphragm is not a matter of invention but design. One would be motivated to weld the entire circumference of the tube to the diaphragm for increased strength or to seal the tube and conversely, one would be motivated to not weld the entire circumference if the additional strength gained is not needed thus saving money.

Regarding claim 13, Tadateru teaches:

wherein the second weld has a width ranging from 10 to 30 mm [see rejection of claim 1 and figure B and consider the intermediate welds to be part of the second weld]. Additionally, Tadateru does teach that the width can be more but discourages it because of welding costs; paragraph 0030.

Regarding claim 15, Tadateru teaches:

wherein the member is at least one of another polygonal hollow section (PHS), a supporting plate [diaphragm; paragraph 0034], a stiffening plate, a connecting plate, a base plate and a top plate.

Regarding claim 16, Tadateru does not specifically teach:

the polygonal hollow section (PHS) and the member define a joint about which a bending moment can be applied, as a result of a load applied to at least one of the PHS, the member, and both the PHS and the member.

However, the examiner notes a bending moment "can be" applied to any joint which then intrinsically transfers the stress to both members. Therefore, the joint of Tadateru meets this limitation.

Regarding claim 17, Tadateru does not specifically teach:

A method for increasing the rotation capacity in a welded moment connection between a polygonal hollow section (PHS) and a member, the method comprising:

applying multiple weld beads transversely across a tensile flange of the PHS in a manner such that strain in at least one comer, located at an end of the PHS that is weld connected to the member, is redistributed to the tensile flange that is adjacent to the at least one comer of the PHS.

However, as noted above in the rejection of claim 1, the prior art does apply multiple weld beads transversely across the surface of the steel square tube; figure B. Therefore, since the steps required to achieve the desired redistribution of strain are meet by the prior art, it is the examiner's position that prior art also achieves the desired distribution of strain.

Regarding claim 18, Tadateru does not specifically teach:

A method for increasing the rotation capacity in a welded moment connection between a polygonal hollow section (PHS) and a member, the method comprising:

applying multiple weld beads transversely across a tensile flange of the PHS in a manner that minimizes the extent to which a heat affected zone through the flange of the PHS lies in a fracture zone adjacent to the weld.

However, as noted above in the rejection of claim 1, the prior art does apply multiple weld beads transversely across the surface of the steel square tube; figure B. Therefore, since the steps required to minimize the extent of the HAZ are meet by prior

art, it is the examiner's position that prior art also achieves the desired distribution of strain.

Regarding claims 19 and 20, Tadateru teaches:

wherein the polygonal hollow section (PHS) is formed from steel having reduced elongation at fracture when compared to a corresponding hot-formed steel section or that the steel is cold-formed and is susceptible to fracture in a heat affected zone adjacent to where the polygonal hollow section (PHS) is joined to the member.

Tadateru refers to the problem of welding cold-formed steel and proposes a solution to this; paragraph 0007. Therefore, Tadateru clearly intends to use the disclosed method on cold-formed steel square tubes.

Regarding claim 21, Tadateru does not teach:

wherein the intermediate weld bead is formed by applying a first intermediate weld bead to the tensile flange adjacent to the connection weld and

applying each successive intermediate weld bead adjacent a previous intermediate weld bead so as to extend the intermediate weld continuously between the connection weld and a final intermediate weld bead, the final intermediate weld bead constituting the second weld.

As noted above in the rejection of claim 1 making weld (311) from multiple welds would have been obvious to one of ordinary skill in the art, situation A. The limitations of the current claim deal with the order in which they are laid. In this case, looking at figures B and C the beads would have to be laid from right to left in order to meet this claim. It would have been obvious to one of ordinary skill in the art at the time of the

invention to lay the beads from right to left because this requires very limited planning and it is much easier to lay beads in this order due to the fact that the previously laid bead can be used a guide for then next.

9. **Claims 8 and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Tadateru et al. (JP2002172462) in further view of Linnert (Welding Metallurgy).

Regarding claim 8, Tadateru does not teach:

wherein the intermediate weld is formed by applying a first intermediate weld bead to the tensile flange adjacent to the second weld bead and applying each successive intermediate weld bead adjacent a previous intermediate weld bead so as to extend the second intermediate weld continuously between the second weld and the connection weld.

Linnert teaches that in a multipass weld each weld bead tempers the previous weld bead and HAZ and that this tempering makes the weld bead and HAZ tougher; pg. 886-887.

So it is not unexpected that the backward welding technique is better because the second weld in this case would be tempered. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to place the second weld bead first so that it would be tempered which would reduce the susceptibility of that weld to cracking.

Regarding claim 9, Tadateru teaches:

wherein the polygonal hollow section (PHS) is at least one of a rectangular hollow section (RHS) and a square hollow section (SHS) [steel square tube; paragraph 0034].

But does not teach:

wherein, after forming the connection weld between the PHS and the member, the second weld is applied, and then two or more intermediate weld beads are applied in succession between the second weld bead and the connection weld, starting with the first intermediate weld bead adjacent to the second weld.

Linnert teaches that in a multipass weld each weld bead tempers the previous weld bead and HAZ and that this tempering makes the weld bead and HAZ tougher; pg. 886-887.

So it is not unexpected that the backward welding technique is better because the second weld in this case would be tempered. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to place the second weld (bead) first so that it would be tempered which would reduce the susceptibility of that weld to cracking. Additionally the number of passes that are needed to connect the spaced weld bead would be very obvious to one of minimal skill in the art of welding and would also depend on the numerous factors listed above in the rejection of claim 1 absent any unexpected results.

10. **Claims 1-3, and 10-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over AWS Welding Handbook; pages 174-182.

Regarding claims 1, 17 and 18,

AWS teaches the following heel weld joint for joining tubular members, including PHS. The examiner added the individual weld beads to 5.45 to illustrate the arguments below.

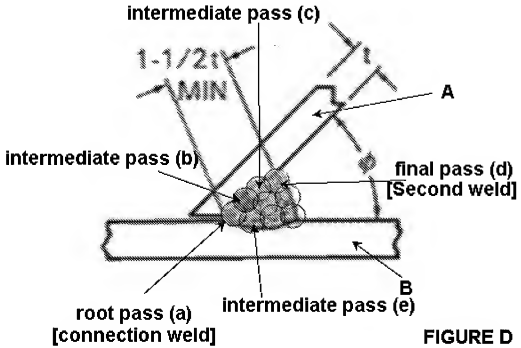

FIGURE D

This type of weld joint is well known in the art and the number of weld beads required to achieve the desired strength are equally well known in the art. Let's assume that someone wants to weld A and B, which are PHS members, together and A and B have 15mm thick walls. Therefore, using the above equation the total width of the weld needs to be at least 22.5mm. For the sake of simplicity, the designer chooses to use GMAW to produce individual beads of 5-6mm in width the entire length of the joint [transversely across the flange of the PHS]. Doing so would create the above cross sectional weld bead profile. Such a profile has a connection weld, two intermediate welds (obviously there could be more if the members where thicker) and a second weld.

As the claims are written they **do not exclude this type of joint** and since this type of weld reads on the claims it is the examiner's position that this joint also achieves the claimed affects.

Regarding claims 2 and 3,

The PHS above has four flanges and choosing whether or not to weld only one or all four is not invention but simple mechanics based on the applied stresses and strains or aesthetics. Additionally, it is well known in the art that such tubular members are commonly used in situations in which they do experience compressive and tensile forces.

Regarding claim 10,

Pass (e) meets this requirement.

Regarding claims 11 and 14,

The examiner notes that the weld beads do not have to be 5-6mm in order to properly weld the above components. It would have been obvious to one of ordinary skill in the art at the time of the invention that the size could vary. One would have been motivated to use larger weld beads in order to decrease production time or to use smaller weld beads to limit the amount of heat input. The size of the weld is not critical and there is much leeway, therefore selection of a particular weld bead size would have been within purview of one of ordinary skill in the art at the time of the invention absent any unexpected results.

Regarding claim 12,

Creating the above welds would fully connect the members.

Regarding claim 13,

Using the above numbers the second weld would be 15-18mm if one were to consider the second weld included the intermediate welds.

Regarding claim 15,

As noted above, B is a PHS. Additionally, it would have been obvious to one of ordinary skill in the art at the time of the invention that B could be any structural member.

Regarding claim 16,

The examiner notes a bending moment "can be" applied to any joint which then intrinsically transfers the stress to both members.

Regarding claims 19 and 20,

It would have been obvious to one of ordinary skill in the art at the time of the invention that the above joint design is typical to the welding of PHS members and would have expected the weld to function on any type of steel tube regardless if it was cold formed or not.

Regarding claim 21,

In order to complete the above welded joint it is intrinsic that (a) is done before (b) which is done before (c) which is done before (d).

Response to Arguments

11. Applicant's arguments filed 2/2/10 have been fully considered but they are not persuasive.

12. The applicant argues that:

> "the claim requires the second and intermediate welds to be formed "on the surface of the tensile flange." This claim language excludes the interpretation that the second and intermediate welds are formed on the groove face or beveled edge of the PHS."

The examiner disagrees. The end of a PHS has four flanges and each flange has at least three exposed sides prior to welding, one side being the inside of the pipe, another side being opposite the inside (the outside of the pipe) and last side being the end of the pipe, thus these three sides can all reasonably be considered surfaces. Therefore, since the groove face is the end of the pipe it is indeed a surface and this limitation does not exclude this interpretation.

Additionally, Tadateru and AWS clearly show placing welds on the outside of the flange in figures 1-4

13. The applicant argues that:

> "In contrast, claim 1 requires at least second and intermediate welds on the surface of the tensile flange. The disclosure of Tadateru does not meet this limitation. The office action argues that the singular cosmetic weld of Tadateru could contain multiple weld beads. Nonetheless, Tadateru does not disclose multiple beads or welds formed on a surface of the tensile flange. In fact, in many embodiments, Tadateru takes the opposite approach and applies the cosmetic weld back over the top of the connection weld (in a stacking arrangement). See Figure 1B of Tadateru."

The examiner never stated that Tadateru taught that the singular cosmetic weld contained multiple weld beads. Instead the examiner relied on very basic welding knowledge that a weld can be made up of more than one bead. Additionally, one of

basic skill in the art would know that the bigger the weld the more weld beads one needs to make the weld. Furthermore, just because Tadateru is not concerned with how the weld is made does not mean that one of ordinary skill would not consider using multiple weld beads. As for the cosmetic weld being applied back over the connection weld, the claims do not exclude this and figure 1b still shows the cosmetic weld extending beyond the toe of the connection weld which meets the limitations in the claims.

14. The applicant argues that:

> "Even if the singular cosmetic weld of Tadateru could contain multiple weld beads, there is nothing in Tadateru to suggest applying the second and intermediate welds to "cause a greatest longitudinal normal strain to occur adjacent the remote location." In fact, it can be argued that the converse applies, in that Tadateru is concerned with disguising the connection weld.... Moving strain away from the joint by applying multiple welds to the surface of the tensile flange is not disclosed, taught, or suggested by Tadateru and, for this reason, claim 1 is patentable over Tadateru.... The (singular) cosmetic infill weld (31) taught in Tadateru functions to cover and hide the weld joint, for aesthetic reasons. "

The examiner agrees that Tadateru does not suggest applying the beads for the same reason as the applicant but this does not mean that Tadateru cannot apply the beads for different a reason and still achieve the same affect that is desired by the applicant. In fact, cosmetic weld of Tadateru is not solely cosmetic but also functional. Weld (31, 311) is placed to prevent cracking from occurring in the HAZ of weld (30) and by doing so cracks form in the HAZ of weld (31, 311); paragraphs 0013, 0014, 0016, 0022, 0025, 0029-0032. Therefore, since the area that is prone to cracking is moved

over due to the addition of weld (31, 311) it is not unreasonable for one to assume that it too causes the greatest normal strain to occur adjacent the remote location. If one takes a very basic look at the applicant's claimed invention and Tadateru one can see strong similarities, a connection is placed to hold two workpieces together, both are concerned about the joint area being susceptible to cracking caused by stress, in order to alleviate this problem both add extra weld metal to the surface of the PHS that lies outside the connection weld. Thus if the applicant's **claimed method** is capable of achieving this property and is identical to the prior art it is not unreasonable to assume that the prior art also achieves the same result.

15. The applicant argues that:

> "It is submitted that there is a two-step leap being made by the Examiner to introduce multiple weld beads, and then to form the weld in the manner identified, to cause the greatest longitudinal normal strain to occur adjacent the remote location. This two-step leap indicates that it would not have been obvious for a person of skill in the art to arrive at the present invention from the teachings of Tadateru."

The examiner disagrees. As noted above Tadateru teaches forming the connection weld and forming an additional weld that lies on the surface of the PHS outside the area of the connection weld. The only leap the examiner has made is that it would have been obvious to one of ordinary skill in the art at the time of the invention that the cosmetic weld of Tadateru could be made from multiple welds. The examiner never said that one would do it for the same reasons as claimed by the applicant.

16. The applicant argues that :

> "The office action argues that Tadateru's weld intrinsically distributes strain away from the joint and also argues that the Applicant has not provided any evidence to show that Tadateru does not intrinsically achieve the claimed limitations. See Office Action at pages 19-20. Such an approach contradicts the Manual of Patent Examining Procedure, which explains that it is the Examiner's burden to show inherency. See MPEP 2112(IV) ("The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic."). There is nothing in the Tadateru reference that suggests the cosmetic weld extends sufficiently from the joint to distribute strain away from the joint to a remote location."

17. The examiner disagrees. The prior art does teach the claimed method and Tadateru further teaches that the crack susceptible area is moved by the placement of weld (31, 311). Therefore the examiner has presented evidence and reasoning to show one would expect that the product made by the prior art to have the same properties as that claimed.

Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). (MPEP 2112.01 [R-3])

18. The applicant argues that:

> "The AWS Welding Handbook is even further from the mark. As shown below, the handbook discloses a weld between two members… The handbook does not provide any detail as to how many welds are used or how the welds are formed. In this case again, the office action argues that multiple weld beads could be used to form the weld, but the handbook itself does not disclose the use of multiple welds or beads. Also, the handbook does not disclose extending the intermediate and second welds from the connection weld to a remote location to cause a greatest longitudinal normal strain to occur adjacent the remote location, as required by claim 1. Therefore, claim 1 is also patentable over the welding handbook."

19. The examiner disagrees. While the examiner acknowledges that what the specification teaches is different than that of the handbook the **claimed method** is not different than that of the handbook and common welding knowledge. The applicant has failed to understand that the AWS book shows how to design a joint for circular and box tubes. This type of design is very basic and is understood readily by one of ordinary skill in the art. If one knows the thickness and angle of intersection between a box tube and a member one could use the formulas given to determine the necessary weld size. For example, one wanting to weld a box tube with a thickness of 15mm to another member at 45° one would need a heel weld of 22.5mm; refer to figure 5.43. One of ordinary skill in the art would know that such a weld should not be performed in one pass but instead of multiple passes. The applicant needs to understand that what is claimed is three weld beads on a PHS but not the exclusion of other weld beads. One welding the heel joint above would put at least three weld beads, root weld bead, intermediate weld bead and final weld bead, which is all that is required by the claim to achieve the desired

affect. Additionally, the examiner invites the applicant to explain to the examiner how the greatest normal strain does not occur near the final pass in such a weld.

Conclusion

20. Should the applicant fail to understand or need any clarification on the rejection or arguments the examiner encourages the applicant to request an interview.

21. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CARLOS GAMINO whose telephone number is (571) 270-5826. The examiner can normally be reached on Monday-Thursday, 9:30am-7:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jessica L. Ward can be reached on (571) 272-1223. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CG

/Jessica L. Ward/
Supervisory Patent Examiner, Art Unit 1793